IN THE CLAIMS:

Please cancel Claim 53 without prejudice. Please amend Claims 24, 47 - 48, 54 - 55, 57 - 58, and 60. Please add new Claim 61.

1 - 23. (Cancelled)

24. (Currently Amended) A mask assembly for use in electron beam lithography, wherein said mask assembly is formed by a method comprising the steps of:

forming a support structure that comprises a substrate that includes an initial plurality of windows;

filling the initial plurality of windows with a temporary fill material;

forming an additional plurality of windows in portions of said substrate which do not contain the temporary fill material;

filling the additional plurality of windows in the substrate with a temporary fill material;

forming over the filled-windowed substrate a mask structure which includes a supporting membrane which permits transmission of electrons therethrough and a patterned mask layer overlying the supporting membrane; and

essentially completely removing the temporary fill material, whereby a mask assembly is produced which comprises a windowed substrate containing a plurality of open windows, with a supporting membrane which transmits electrons directly overlying, parallel to, and supported by a major surface of said windowed substrate, and a patterned mask layer directly overlying the support membrane, wherein said mask assembly width and length dimensions are each several inches on a side.

25 - 46. (Cancelled)

47. (Currently Amended) A structure useful in electron beam lithography for controlling the irradiation of a semiconductor workpiece, said structure including a ~~mask layer~~ masking assembly which is supported by a grid structure, said grid structure comprising a plurality of windows which permit the transmission of electron beam radiation passing through said masking assembly, where the masking assembly includes a membrane layer which permits electron transfer therethrough and a mask layer which overlies the membrane layer and is supported by the membrane layer, wherein a plurality of major struts and minor struts arranged in rows and columns define an array of windows, wherein said major struts are several times thicker than said minor struts, and wherein said minor struts exhibit a width which does not interfere with transmission of electron beam radiation which has passed through said mask.

48. (Currently Amended) A structure in accordance with Claim 47, ~~wherein said mask comprises a patterned layer overlying a membrane, where~~ wherein said membrane permits electrons ~~which pass through the patterned layer~~ to pass through said membrane essentially without loss in electron beam energy.

49. (Previously Presented) A structure in accordance with Claim 48, wherein the thickness of said membrane is less than about 1000 Angstroms.

50. (Previously Presented) A structure in accordance with Claim 47, wherein said mask layer is a stencil mask.

51. (Previously Presented) A structure in accordance with Claim 47, or Claim 48, or Claim 49, or Claim 50, wherein said plurality of struts is constructed from a ceramic material.

52. (Previously Presented) A structure in accordance with Claim 51, wherein said ceramic material is selected from the group consisting of aluminum oxide and silicon carbide.

53. (Cancelled)

54. (Currently Amended) A temporary structure useful in fabrication of an electron beam lithography mask, said temporary structure comprising a patterned mask layer overlying a membrane support layer overlying a grid structure which includes a plurality of windows which are filled by a support material ~~in accordance with Claim 53~~, wherein said plurality of windows comprises a plurality of major struts and minor struts, and wherein said major struts are several times thicker than said minor struts.

55. (Currently Amended) A temporary structure useful in fabrication of an electron beam lithography mask, said temporary structure comprising a patterned mask layer overlying a membrane support layer overlying a grid structure comprising a plurality of windows which are filled by a support material ~~in accordance with Claim 53, wherein said mask comprises a patterned layer overlying a membrane, where~~ , wherein said membrane layer permits electrons which pass through the patterned layer to pass through said membrane essentially without loss in electron beam energy.

56. (Previously Presented) A temporary structure in accordance with Claim 55, wherein the thickness of said membrane is less than about 1000 Angstroms.

57. (Currently Amended) A temporary structure in accordance with Claim ~~53~~ 54 or Claim 55, wherein said mask layer is a stencil mask.

58. (Currently Amended) A temporary structure in accordance with Claim 54 or Claim 55, wherein said plurality of struts is constructed from a ceramic material.

59. (Previously Presented) A temporary structure in accordance with Claim 58, wherein said ceramic material is selected from the group consisting of aluminum oxide and silicon carbide.

60. (Currently Amended) A temporary structure in accordance with Claim 58 ~~or Claim 59~~, wherein said temporary fill material is selected from the group consisting of an epoxy, a polymer, a metal, or silicon oxide, wherein the selection of said temporary fill material depends on the selection of material used to construct said plurality of struts, so that said temporary fill material can be conveniently removed essentially without harm to said plurality of struts.

61. (New) A temporary structure in accordance with Claim 59, wherein said temporary fill material is selected from the group consisting of an epoxy, a polymer, a metal, or silicon oxide, wherein the selection of said temporary fill material depends on the selection of material used to construct said plurality of struts, so that said temporary fill material can be conveniently removed essentially without harm to said plurality of struts.